

REMARKS

Claims 1-6 are all the claims pending in the application. Claims 1-4 have been amended to more clearly point out the invention. The specification has been amended to correct typographical errors. The abstract of the disclosure has been amended to comply with the regulation. No new matter has been introduced and entry of the amendments is respectfully requested.

Specification Objection

The abstract of the disclosure stands objected to because it consists of more than one paragraph. The abstract of the disclosure, as currently presented, consists of one paragraph.

Withdrawal of the objection to the specification is respectfully requested.

Furthermore, the specification has been amended to correct typographical errors. That is, the sentence "R₃ is -(CH)_n-, herein, n = 0 or 1" has been corrected to "R₃ is -(CH₂)_n-, herein, n = 0 or 1." Support for the amendments may be found throughout the disclosure of the specification, for example, on pages 10-13 of the specification.

Claim rejections - 35 USC §112

Claims 1 and 3-7 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Office Action pointed out that Claim 1 recites the limitation "R₃ is -(CH)-," which is an incomplete structural description.

Claim 1 has been amended to correct "R₃ is -(CH)_n-" to "R₃ is -(CH₂)_n-."

Claims 3 and 4 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the limitation "(b) Substituting an alkyl group for amide bond of benzamide formed in said step" in claims 3 and 4 were pointed out by the Office Action as rendering the claims indefinite.

Claims 3 and 4 have been amended to recite, in relevant part, "(b) optionally, substituting an amide bond of the benzamide formed in step (a) with an alkyl group, to produce an alkyl-substituted benzamide compound; (c) hydrolyzing a methylester of the benzamide formed in step (a) or the alkyl-substituted benzamide compound formed in step (b), to produce an acid."

Therefore, it is believed that the amendments to Claims 1, 3 and 4 render the rejections under 35 U.S.C. § 112 moot. Applicants respectfully request withdrawal of the rejection.

Claim rejections - 35 U.S.C. §102

Claims 1, 2 and 5-7 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Gadek *et al.* (US 2002/0172967, hereinafter "Gadek") or Breslow *et al.* (US 5,700,811, hereinafter "Breslow").

Gadek is relied upon to teach (Page 21, column 2, lines 5 and 7) compounds which correspond to the compounds of Formula 1 in which R₁ is 4-methylphenyl, n= 0 or 1, R₄ is a hydrogen atom.

Breslow is relied upon to teach (Column 24, lines 45 64) a compound which correspond to the compounds of Formula 1 in which R₁ is phenyl, n= 0, R₄ is a hydrogen atom.

Applicants have amended Claims 1 and 2 to exclude the following compounds from Claims 1 and 2:

N-[4-(N-hydroxycarbamoyl)phenyl][4-methylphenyl]carboxamide,
N-[4-(N-hydroxycarbamoylmethyl)phenyl][4-methylphenyl]carboxamide, and
[4-(N-hydroxycarbamoyl)phenyl]N-benzamide.

The amendments render the rejections under 35 U.S.C. § 102(b) with respect to Claims 1 and 2 as well as Claims 5-7, which refers to Claim 1. Accordingly, it is respectfully requested that the rejections be withdrawn.

Claim rejections - 35 U.S.C. § 103

Claims 1, 2 and 5-7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Gadek. Claims 1, 2 and 5-7 also were rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuneshi *et al.* (JP 10-182583, hereinafter “Tsuneshi”).

Gadek was discussed above with respect to the rejection under 35 U.S.C. § 102(b). In particular, Gadek is relied upon to teach (Page 21, column 2, line 9) a compound which corresponds to a homolog of the compounds of Formula 1 in which R₁ is 4-methylphenyl, n= 2, R₄ is a hydrogen atom. Gadek reports (Paragraph [0143]) that these compounds have utility as drug lead compounds.

The Office Action recognizes the difference between the compound of Gadek and the claimed compounds is that that taught by Gadek has two methylene groups between the aromatic ring and attached hydroxamic acid group while the claimed compounds of the present application have a single methylene group between the aromatic ring and attached hydroxamic acid group.

The Office Action asserts that one of ordinary skill in the art would have been motivated to modify the compound of Gadek to make the lower adjacent homologue in the expectation that it would exhibit properties similar to those taught by Gadek.

Applicants respectfully traverse the rejection for the following reasons.

The difference in the length of carbon chain, as the Office Action recognizes, may not make a significant difference in general. However, in the case of the compounds as presently claimed in the present application, the difference of one or no methylene group vs. two methylene groups makes significant differences in the function and utility of the compound containing them.

When the compound has two or more methylene groups between the aromatic ring and attached hydroxamic acid group, such a compound cannot function as a retinoid to promote collagen biosynthesis and to inhibit the expression of collagenase. As the Office Action correctly recognizes, the compounds of Gadek has utility as drug lead compounds. Contrary to the Office Action asserting that one of ordinary skill in the art would have been motivated to modify the compound of Gadek to make the lower adjacent homologue in the expectation that it would exhibit properties similar to those taught by Gadek, the presently claimed compounds have different utility and function from those of the compound of Gadek. Therefore, the Office Action fails to establish *prima facie* obviousness.

Furthermore, the compounds of the present invention function as a ligand to retinoic acid receptor, which is possible only when the compounds have none or a single methylene group (i.e. $n=0$ or 1) between the aromatic ring and attached hydroxamic acid group. If the compound has

two methylene groups (i.e. $n=2$) such as those taught by Gadek, the compound cannot function as a ligand to the retinoic acid acceptor, and thus are not able to produce such an effect.

Therefore, Applicants respectfully submit that the rejection under 35 U.S.C. § 103 over Gadek cannot be sustainable. It is requested that the rejection be withdrawn.

Tsuneshi is relied upon to teach (Paragraph [0031], compound 49) a compound which corresponds to a homolog of those of instantly claimed Formula 1 in which R_1 is phenyl, $n=2$, R_4 is a hydrogen atom. Tsuneshi reports (Paragraph [0082]) an use of compositions of these compounds for treatment of cancer cells.

The Office Action recognizes the difference between the compound of Tsuneshi and the claimed compounds is that that taught by Tsuneshi has two methylene groups between the aromatic ring and attached hydroxamic acid group while the claimed compounds of the present application have a single methylene group between the aromatic ring and attached hydroxamic acid group.

The Office Action asserts that one of ordinary skill in the art would have been motivated to modify the compound of Tsuneshi to make the lower adjacent homologue in the expectation that it would exhibit properties similar to those taught by Tsuneshi.

Applicants respectfully traverse the rejection for the following reasons.

For the compounds as presently claimed in the present application, the difference of one or no methylene group vs. two methylene groups, which are present between the aromatic ring and attached hydroxamic acid group, makes significant differences in the function and utility of the compound containing them.

When the compound has two or more methylene groups between the aromatic ring and attached hydroxamic acid group, such a compound cannot function as a retinoid to promote collagen biosynthesis and to inhibit the expression of collagenase. As the Office Action correctly notes, the compounds of Tsuneshi has utility for treating cancer cells. Contrary to the Office Action asserting that one of ordinary skill in the art would have been motivated to modify the compound of Tsuneshi to make the lower adjacent homologue in the expectation that it would exhibit properties similar to those taught by Tsuneshi, the presently claimed compounds have different utility and function from those of the compound of Tsuneshi. Therefore, the Office Action fails to establish prima facie obviousness.

Furthermore, the compounds of the present invention function as a ligand to retinoic acid receptor, which is possible only when the compounds have none or a single methylene group (i.e. $n=0$ or 1) between the aromatic ring and attached hydroxamic acid group. If the compound has two methylene groups (i.e. $n=2$) such as those taught by Tsuneshi, the compound cannot function as a ligand to the retinoic acid acceptor, and thus are not able to produce such an effect.

Therefore, Applicants respectfully submit that the rejection under 35 U.S.C. § 103 over Tsuneshi cannot be sustainable. It is requested that the rejection be withdrawn.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Amendment under 37 C.F.R. 1.111
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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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